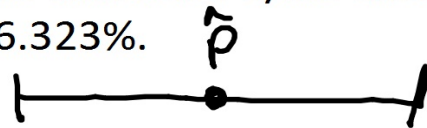


HW answers:

27) (a) $\hat{p} = 32/153$ $n=153$ $\text{conf} = 90\%$

- check conditions
- write formula
- calculate interval: (0.15507, 0.26323)
- Write sentence: We are 90% confident that the true percent of deers with ticks that have Lyme disease is between 15.507% and 26.323%.



(b) $\text{MOE} = 0.05408$

$$\text{cut in half} = 0.02704 = (1.645)\sqrt{(0.1654/n)}$$

$$n = 613 \text{ deer}$$

(c) It is not random! The deer are only taken from ones that hunters have taken, not all deer.

29) $p\text{-hat} = 0.25$

$$(a) 0.06 = (1.645)\sqrt{(0.25*0.75/n)} \quad n = 141$$

$$(b) 0.04 = (1.645)\sqrt{(0.25*0.75/n)} \quad n = 318$$

$$(c) 0.03 = (1.645)\sqrt{(0.25*0.75/n)} \quad n = 564$$

30) $p\text{-hat} = 0.5$

$$(a) 0.05 = (2.326)\sqrt{(0.5*0.5/n)} \quad n = 542$$

$$(b) 0.03 = (2.326)\sqrt{(0.5*0.5/n)} \quad n = 1503$$

$$(c) 0.01 = (2.326)\sqrt{(0.5*0.5/n)} \quad n = 13,526$$

**Not easy to sample this many businesses!

$$32) 0.04 = (2.576) \sqrt{(0.5 * 0.5 / n)} \quad n = 1037$$